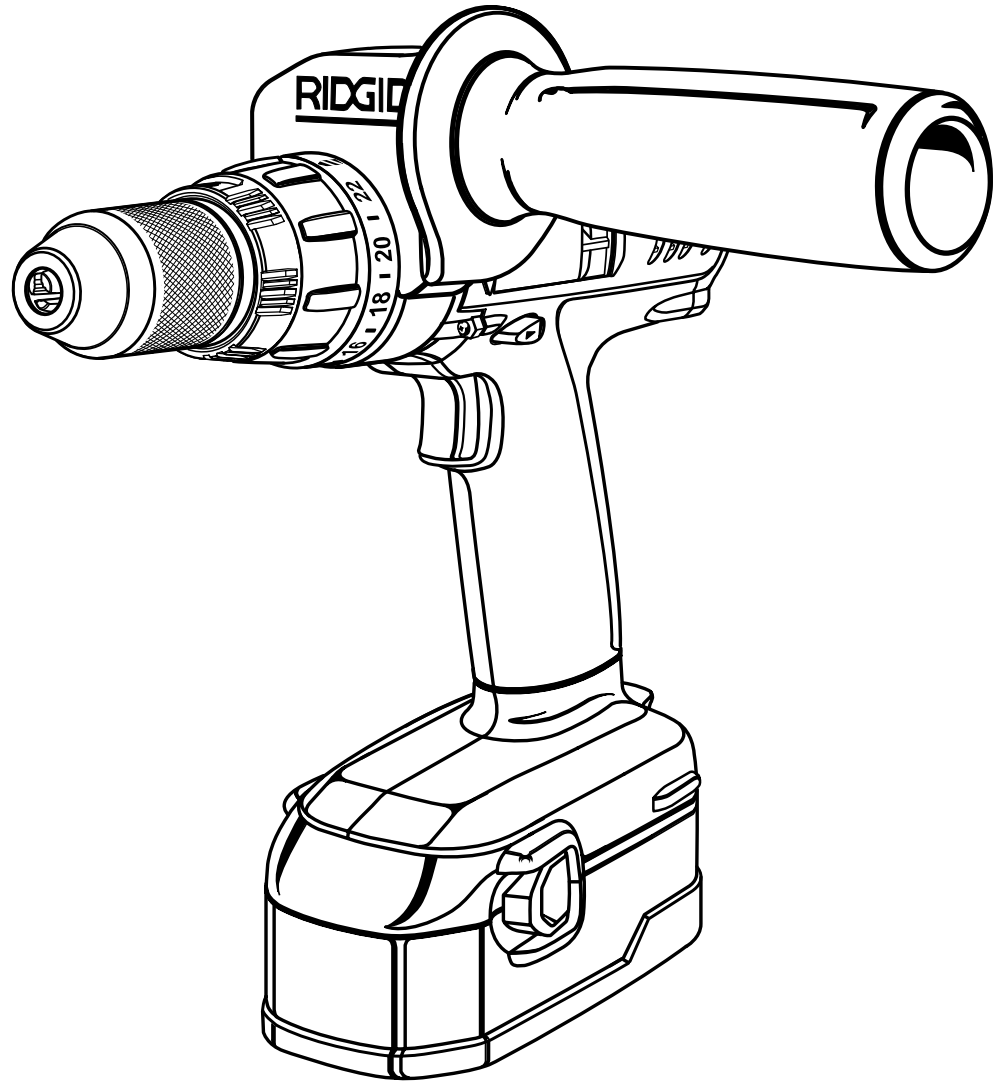


# OPERATOR'S MANUAL

1/2 in., 18 VOLT HAMMER DRILL  
R8411503



Your hammer drill has been engineered and manufactured to our high standards for dependability, ease of operation, and operator safety. When properly cared for, it will give you years of rugged, trouble-free performance.

**⚠ WARNING:**

To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for buying a RIDGID product.

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

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## INTRODUCTION

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This tool has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

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### **WARNING:**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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# GENERAL SAFETY RULES

## WARNING!

### READ AND UNDERSTAND ALL INSTRUCTIONS.

Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

## SAVE THESE INSTRUCTIONS

### WORK AREA

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

### ELECTRICAL SAFETY

- **A battery operated tool with integral batteries or a separate battery pack must be recharged only with the specified charger for the battery.** A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.
- **Use battery operated tool only with specifically designated battery pack.** Use of any other batteries may create a risk of fire.
- **Use battery only with charger listed.**

MODEL	BATTERY PACK	CHARGER
R8411503	130254003 130254007	140276001, 140276002 140276003, or 140276004

- **Do not abuse the cord. Never use the cord to carry the tool.** Keep cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords may create a fire.

### PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- **Avoid accidental starting. Be sure switch is in the locked or off position before inserting battery pack.** Carrying tools with your finger on the switch or inserting the battery pack into a tool with the switch on invites accidents.
- **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enable better control of the tool in unexpected situations.
- **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.
- **Do not wear loose clothing or jewelry. Contain long hair.** Loose clothes, jewelry, or long hair can be drawn into air vents.
- **Do not use on a ladder or unstable support.** Stable footing on a solid surface enables better control of the tool in unexpected situations.

### TOOL USE AND CARE

- **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
- **Do not use tool if switch does not turn it on or off.** A tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause sparks, burns, or a fire.
- **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
- **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may create a risk of injury when used on another tool.
- **Keep the tool and its handle dry, clean and free from oil and grease.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any strong solvents to clean your tool. Following this rule will reduce the risk of loss of control and deterioration of the enclosure plastic.

# GENERAL SAFETY RULES

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## SERVICE

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel may result in a risk of injury.

## SPECIFIC SAFETY RULES

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- **Use auxiliary handles supplied with the tool.** Loss of control can cause personal injury.
- **Wear ear protectors with impact drills.** Exposure to noise can cause hearing loss.
- **Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring.** Contact with a “live” wire will also make exposed metal parts of the tool “live” and shock the operator.
- **Know your power tool. Read operator’s manual carefully. Learn its applications and limitations, as well as the specific potential hazards related to this tool.** Following this rule will reduce the risk of electric shock, fire, or serious injury.
- **Always wear safety glasses with side shields.** Everyday glasses have only impact resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye injury.
- **Protect your lungs. Wear a face or dust mask if the operation is dusty.** Following this rule will reduce the risk of serious personal injury.
- **Protect your hearing. Wear hearing protection during extended periods of operation.** Following this rule will reduce the risk of serious personal injury.
- **Battery tools do not have to be plugged into an electrical outlet; therefore, they are always in operating condition. Be aware of possible hazards when not using your battery tool or when changing accessories.** Following this rule will reduce the risk of electric shock, fire, or serious personal injury.
- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of shock or injury.
- **Do not place battery tools or their batteries near fire or heat.** This will reduce the risk of explosion and possibly injury.
- **Never use a battery that has been dropped or received a sharp blow.** A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- **Batteries vent hydrogen gas and can explode in the presence of a source of ignition, such as a pilot light.** To reduce the risk of serious personal injury, never use any cordless product in the presence of open flame. An exploded battery can propel debris and chemicals. If exposed, flush with water immediately.
- **Do not charge battery tool in a damp or wet location.** Following this rule will reduce the risk of electric shock.
- **For best results, your battery tool should be charged in a location where the temperature is more than 50°F but less than 100°F. Do not store outside or in vehicles.**
- **Under extreme usage or temperature conditions, battery leakage may occur. If liquid comes in contact with your skin, wash immediately with soap and water, then neutralize with lemon juice or vinegar. If liquid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention.** Following this rule will reduce the risk of serious personal injury.

# SAFETY RULES FOR CHARGER

## **WARNING!**

### **READ AND UNDERSTAND ALL INSTRUCTIONS.**

Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

- **Before using battery charger**, read all instructions and cautionary markings in this manual, on battery charger, battery, and product using battery to prevent misuse of the products and possible injury or damage.

## **CAUTION:**

To reduce the risk of electric shock or damage to the charger and battery, charge only nickel-cadmium rechargeable batteries as specifically designated on your charger. Other types of batteries may burst, causing personal injury or damage.

- **Do not use charger outdoors or expose to wet or damp conditions.** Water entering charger will increase the risk of electric shock.
- **Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.** Following this rule will reduce the risk of electric shock, fire, or serious personal injury.
- **Do not abuse cord or charger.** Never use the cord to carry the charger. Do not pull the charger cord rather than the plug when disconnecting from receptacle. Damage to the cord or charger could occur and create an electric shock hazard. Replace damaged cords immediately.
- **Make sure cord is located so that it will not be stepped on, tripped over, come in contact with sharp edges or moving parts or otherwise subjected to damage or stress.** This will reduce the risk of accidental falls, which could cause injury, and damage to the cord, which could result in electric shock.
- **Keep cord and charger from heat to prevent damage to housing or internal parts.**
- **Do not let gasoline, oils, petroleum-based products, etc. come in contact with plastic parts.** They contain

chemicals that can damage, weaken, or destroy plastic.

- **An extension cord should not be used unless absolutely necessary.** Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:

- a. That pins on plug of extension cord are the same number, size and shape as those of plug on charger.
- b. That extension cord is properly wired and in good electrical condition; and
- c. That wire size is large enough for AC ampere rating of charger as specified below:

Cord Length (Feet)	25'	50'	100'
Cord Size (AWG)	16	16	16

**NOTE:** AWG = American Wire Gauge

- **Do not operate charger with a damaged cord or plug**, which could cause shorting and electric shock. If damaged, have the charger replaced by an authorized serviceman.
- **Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way.** Take it to an authorized serviceman for electrical check to determine if the charger is in good working order.
- **Do not disassemble charger.** Take it to an authorized serviceman when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
- **Unplug charger from outlet before attempting any maintenance or cleaning to reduce the risk of electric shock.**
- **Disconnect charger from the power supply when not in use.** This will reduce the risk of electric shock or damage to the charger if metal items should fall into the opening. It also will help prevent damage to the charger during a power surge.
- **Risk of electric shock.** Do not touch uninsulated portion of output connector or uninsulated battery terminal.
- **Save these instructions.** Refer to them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also to prevent misuse of the product and possible injury.

## IMPORTANT SAFETY INSTRUCTIONS

### 1. **SAVE THESE INSTRUCTIONS**











This manual contains important safety and operating instructions for battery charger 140276003.

2. **Before using battery charger**, read all instructions and cautionary markings on battery charger, battery, and product using battery.

3. **CAUTION:** To reduce the risk of injury, charge only nickel-cadmium rechargeable batteries. Other types of batteries may burst, causing personal injury or damage.




# SYMBOLS

Some of the following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
~	Alternating Current	Type of current
≡	Direct Current	Type or a characteristic of current
$n_0$	No Load Speed	Rotational speed, at no load
	Class II Construction	Double-insulated construction
.../min	Per Minute	Revolutions, strokes, surface speed, orbits etc., per minute
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and, as necessary, a full face shield when operating this product.
	Safety Alert	Precautions that involve your safety.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Hot Surface	To reduce the risk of injury or damage, avoid contact with any hot surface.

# SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	<b>DANGER:</b>	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	<b>WARNING:</b>	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	<b>CAUTION</b>	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	<b>CAUTION</b>	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

## SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to your nearest **AUTHORIZED SERVICE CENTER** for repair. When servicing, use only identical replacement parts.



### WARNING:

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call RIDGID customer service for assistance.



### WARNING:



The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and, when needed, a full face shield. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.

## SAVE THESE INSTRUCTIONS

# FEATURES

## PRODUCT SPECIFICATIONS

Chuck ..... 1/2 in. Keyless  
 Motor ..... 18 Volt DC  
 Switch ..... VSR (Variable Speed Reversible)  
 No Load Speed ..... 0-450/0-1,600/min.

Blows per minute ..... 0-7,200/0-25,600 BPM  
 Clutch ..... 24 Position  
 Torque ..... 585 in.lb.  
 Charger Input ..... 120 V, 60 Hz, AC only

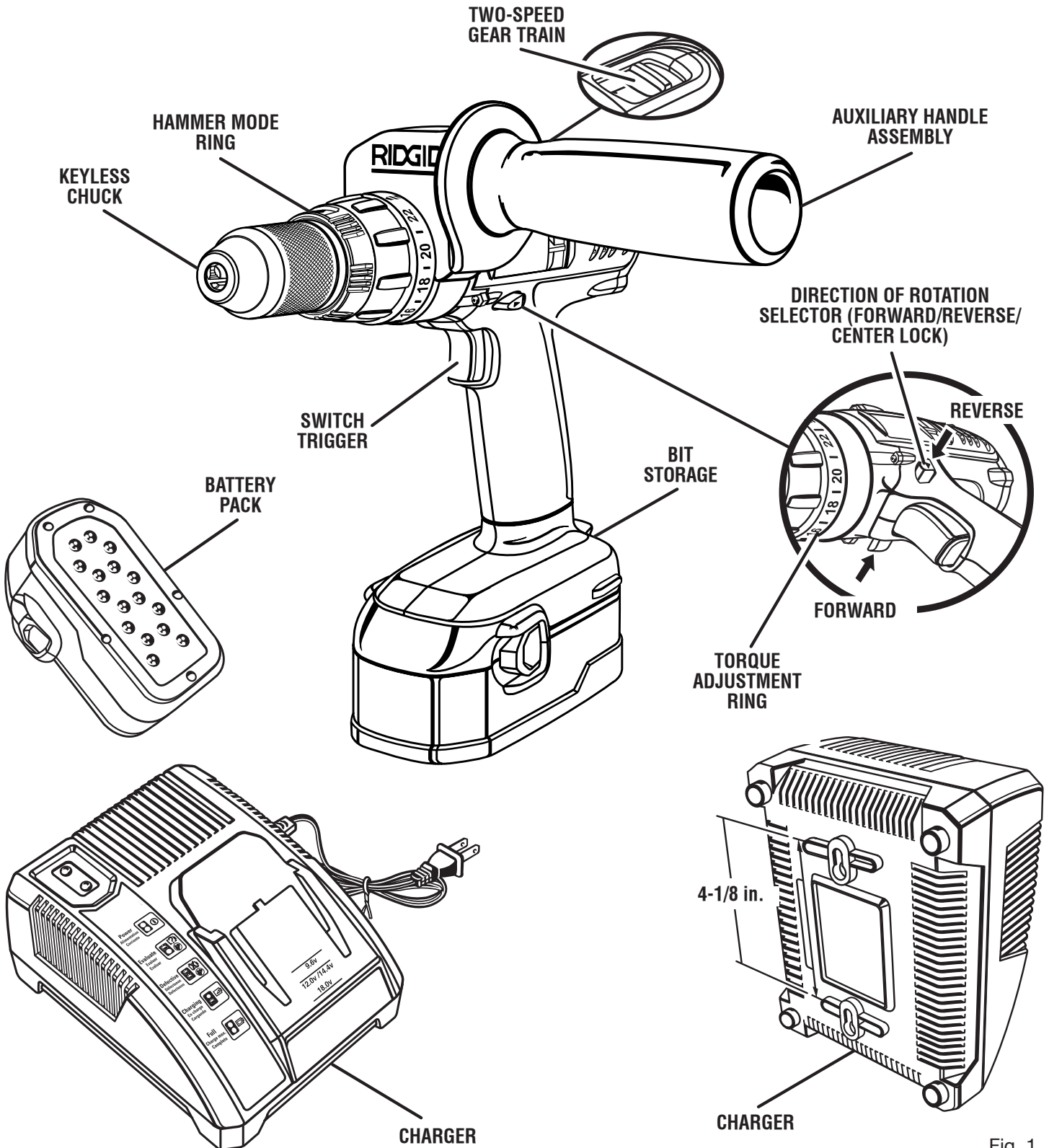


Fig. 1



# FEATURES

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## KNOW YOUR HAMMER DRILL

See Figure 1.

The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

## AUXILIARY HANDLE ASSEMBLY

Your drill is equipped with an auxiliary handle assembly for ease of operation and to prevent loss of control.

## BIT STORAGE

Bits provided with the drill can be placed in the storage area, located on the base of the drill.

## BLOWS PER MINUTE

This tool features an impact speed of 0-7,200 BPM in LO Speed and 0-25,600 BPM in HI Speed. BPM (Blows Per Minute) is the number of impacts per minute.

## CHARGER

The charger has a key-hole hanging feature for convenient, space-saving storage. Screws should be installed so that the center distance is 4-1/8 in.

## DIRECTION OF ROTATION SELECTOR (FORWARD/REVERSE/CENTER LOCK)

Your drill has a direction of rotation (forward/reverse/center lock) selector located above the switch trigger for changing

the direction of bit rotation. Setting the switch trigger in the **OFF** (center lock) position helps reduce the possibility of accidental starting when not in use.

## HAMMER MODE RING

Using the hammer mode ring, the operator can select either hammer mode or drilling mode.

## KEYLESS CHUCK

The keyless chuck allows you to hand-tighten or release the drill bit in the chuck jaws.

## TORQUE ADJUSTMENT RING

Your drill has a 24-position clutch. The torque adjustment ring can be turned to select the right amount of torque for your application.

## TWO-SPEED GEAR TRAIN

The two-speed gear train is designed for drilling or driving at **LO (1)** or **HI (2)** speeds. A slide switch is located on top of your drill for selecting either **LO (1)** or **HI (2)** speed.

## VARIABLE SPEED

The variable speed switch trigger delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

# ASSEMBLY

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## UNPACKING

This product has been shipped completely assembled.

- Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- If any parts are damaged or missing, please call 1-866-539-1710 for assistance.

## PACKING LIST

1/2 in. Hammer Drill  
Double-ended Bit  
Auxiliary Handle  
Battery Pack  
Charger  
Tool Bag  
Operator's Manual

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### **WARNING:**

If any parts are damaged or missing do not operate this tool until the parts are replaced. Failure to heed this warning could result in serious personal injury.

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### **WARNING:**

Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

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### **WARNING:**

To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the tool when assembling parts.

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# OPERATION

## **WARNING:**

Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict severe injury.

## **WARNING:**

Always wear safety goggles or safety glasses with side shields when operating tools. Failure to do so could result in objects being thrown into your eyes resulting in possible serious injury.

## **WARNING:**

Do not use any attachments or accessories not recommended by the manufacturer of this tool. The use of attachments or accessories not recommended can result in serious personal injury.

## APPLICATIONS

You may use this tool for the purposes listed below:

- Hammer drilling in concrete, brick, or other masonry
- Drilling in wood
- Drilling in ceramics, plastics, fiberglass, and laminates
- Drilling in metals
- Driving screws
- Mixing paint

## CAUTION:

If at any point during the charging process none of the LEDs are lit, remove the battery pack from the charger to avoid damaging the product. DO NOT insert another battery. Return the charger and battery to your nearest service center for service or replacement.

## CHARGING THE BATTERY PACK

The battery pack for this tool has been shipped in a low charge condition to prevent possible problems. Therefore, you should charge it until the light on front of charger changes from flashing green to continuous green.

**NOTE:** Batteries will not reach full charge the first time they are charged. Allow several cycles (operation followed by recharging) for them to become fully charged. This is normal for nickel-cadmium batteries.

## TO CHARGE

- Charge the battery pack only with the charger provided.
- Make sure the power supply is normal household voltage, **120 volts, 60 Hz, AC only.**
- Connect the charger to a power supply.

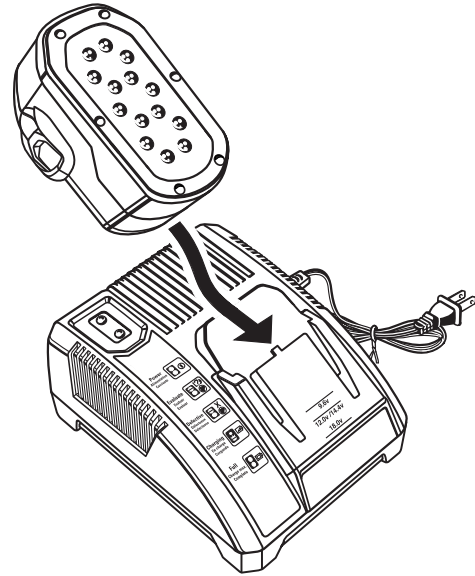


Fig. 2

- Attach the battery pack to the charger by aligning the raised ribs on the battery pack with the grooves in the charger, then slide the battery pack onto the charger. *See Figure 2.*
- The battery pack will become slightly warm to the touch while charging. This is normal and does not indicate a problem.
- Do not place the charger in an area of extreme heat or cold. It will work best at normal room temperature.
- For average charge times, refer to the chart on the following page.
- When the batteries become fully charged, unplug the charger from the power supply and remove the battery pack.

## CHARGING A HOT BATTERY PACK

When using the tool continuously, the batteries in the battery pack will become hot. You should let a hot battery pack cool down for approximately 30 minutes before attempting to recharge. When the battery pack becomes discharged and is hot, the green LED will be off and the red LED will begin flashing.

When the battery pack cools down to approximately 104°F (40°C), the charger will automatically begin fast charge mode.

## CHARGING A COOL BATTERY PACK






If the battery pack is below normal temperature range, the red LED will begin flashing and the green LED will be off. When the battery warms to a temperature of more than 41°F (5°C), the charger will automatically begin fast charge mode.

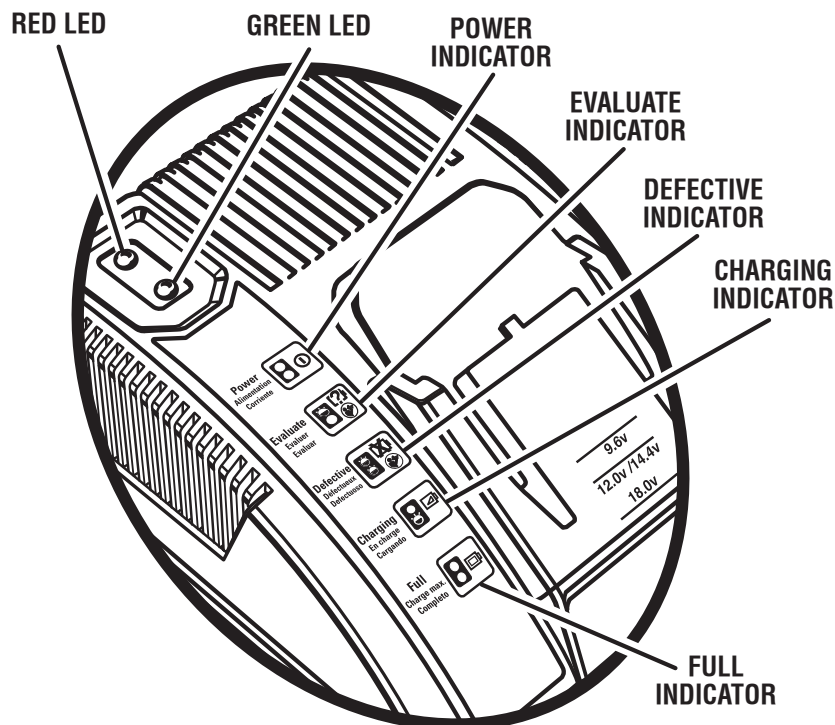
**NOTE:** Refer to **CHARGING THE BATTERY PACK** for normal recharging of batteries. If the charger does not charge your battery pack under normal circumstances, return both the battery pack and charger to your nearest repair center for electrical check. For the location of your nearest repair center, please call 1-866-539-1710.

# OPERATION

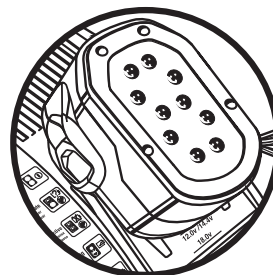
## LED FUNCTION OF CHARGER

See Figure 3.

LED INDICATOR	BATTERY PACK	RED LED	GREEN LED	ACTION
<b>Power</b> Alimentation Corriente 	Without battery pack	ON	OFF	Ready to charge battery pack
<b>Evaluate</b> Evaluer Evaluar 	Hot battery pack	Flashing	OFF	When battery pack reaches cooled temperature, charger begins fast charge mode.
	Cold battery pack	Flashing	OFF	When battery pack reaches warmed temperature, charger begins fast charge mode.
	Deeply discharged	Flashing	OFF	Charger pre-charges battery until normal voltage is reached, then begins fast charge mode.
<b>Defective</b> Défectueux Defectuoso 	Defective	Flashing	Flashing	Battery pack or charger is defective • If defective, try to repeat the conditions a second time by removing and reinstalling the battery pack. If the LED status repeats a second time, try charging a different battery. • If a different battery charges normally, dispose of the defective pack (see <i>Maintenance</i> section). • If a different battery also indicates “Defective,” the charger may be defective.
<b>Charging</b> En charge Cargando 	Fast charging	ON	Flashing	See chart below for charge times
<b>Full</b> Charge max. Completo 	Slow charging	OFF	ON	Fast charging is complete; charger maintains charge mode



BATTERY	AVERAGE CHARGE TIME
COMPACT SERIES	18 min.
HC	27 min.
HC 2.5	34 min.



**NOTE:** The 9.6 Volt, 12 Volt, and 14.4 Volt battery packs will not slide all the way down onto the charger port. Insert 9.6 Volt, 12 Volt, and 14.4 Volt battery packs until they click into place and are aligned with the line on the charger, shown at left. Allow up to 5 seconds for the “charge” light to come on after the battery pack is inserted.

Fig. 3

# OPERATION

## TO INSTALL BATTERY PACK

See Figure 4.

- Lock the switch trigger on the drill by placing the direction of rotation (forward/reverse/center lock) selector in center position.
- Place the battery pack in the drill. Align the raised rib on the battery pack with the groove inside the drill.
- Make sure the latches on each side of your battery pack snap in place and battery pack is secured in the drill before beginning operation.

### CAUTION:

When placing battery pack in the tool, be sure raised rib on battery pack aligns with the bottom of the drill and latches into place properly. Improper installation of the battery pack can cause damage to internal components.

## REMOVING BATTERY PACK

See Figure 4.

- Lock the switch trigger on the drill by placing the direction of rotation selector in center position.
- Locate the latches on the side of the battery pack and depress to release the battery pack from the drill.
- The battery pack will automatically disconnect in the direction to be removed when buttons are depressed.
- Remove the battery pack from the drill.

### WARNING:

Battery tools are always in operating condition. Therefore, switch should always be locked when not in use or carrying at your side.

## SWITCH TRIGGER

See Figure 5.

To turn the drill **ON**, depress the switch trigger. To turn it **OFF**, release the switch trigger.

## VARIABLE SPEED

The variable speed switch trigger delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

**NOTE:** You might hear a whistling or ringing noise from the switch during use. Do not be concerned; this is a normal part of the switch function.

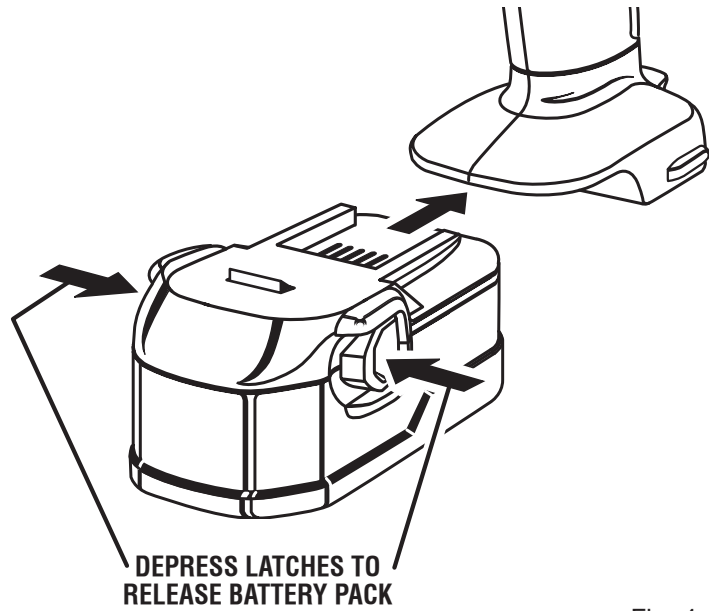


Fig. 4

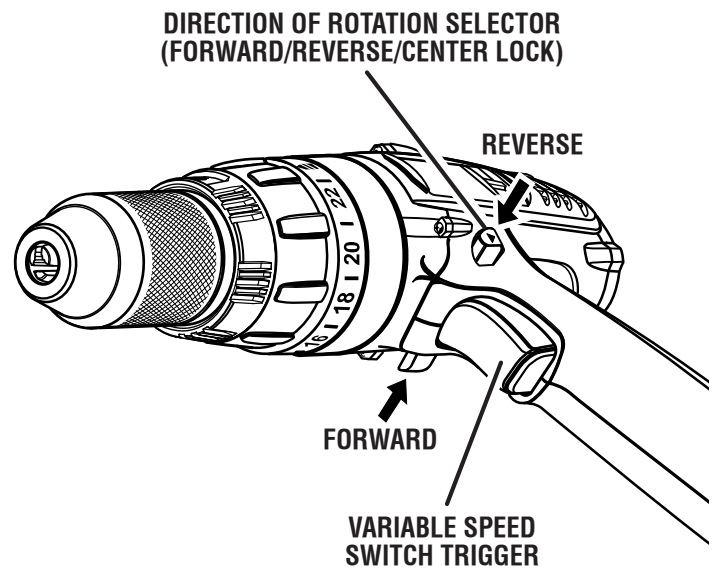


Fig. 5

# OPERATION

## DIRECTION OF ROTATION SELECTOR (FORWARD/REVERSE/CENTER LOCK)

See Figure 5.

The direction of bit rotation is reversible and is controlled by a selector located above the switch trigger. With the drill held in normal operating position, the direction of rotation selector should be positioned to the left of the switch trigger for drilling. The drilling direction is reversed when the selector is to the right of the switch trigger.

Setting the switch trigger in the OFF (center lock) position helps reduce the possibility of accidental starting when not in use.

### CAUTION:

To prevent gear damage, always allow the chuck to come to a complete stop before changing the direction of rotation.

To stop the drill, release the switch trigger and allow the chuck to come to a complete stop.

**NOTE:** The drill will not run unless the direction of rotation selector is pushed fully to the left or right.

Avoid running the drill at low speeds for extended periods of time. Running at low speeds under constant usage may cause the drill to become overheated. If this occurs, cool the drill by running it without a load and at full speed.

## KEYLESS CHUCK

See Figure 6.

The drill has a keyless chuck to tighten or release drill bits in the chuck jaws. The arrows on the chuck indicate which direction to rotate the chuck body in order to **LOCK** (tighten) or **UNLOCK** (release) the drill bit.

### ⚠ WARNING:

Do not hold the chuck body with one hand and use the power of the drill to tighten the chuck jaws on the drill bit. The chuck body could slip in your hand, or your hand could slip and come in contact with the rotating drill bit. This could cause an accident resulting in serious personal injury.

## TWO-SPEED GEAR TRAIN

See Figure 7.

The drill has a two-speed gear train designed for drilling or driving at **LO (1)** or **HI (2)** speeds. A slide switch is located on top of the drill to select either **LO (1)** or **HI (2)** speed. When using drill in the **LO (1)** speed range, speed will decrease and unit will have more power and torque. When using drill in the **HI (2)** speed range, speed will increase and unit will have less power and torque. Use **LO (1)** speed for high power and torque applications and **HI (2)** speed for fast drilling or driving applications.

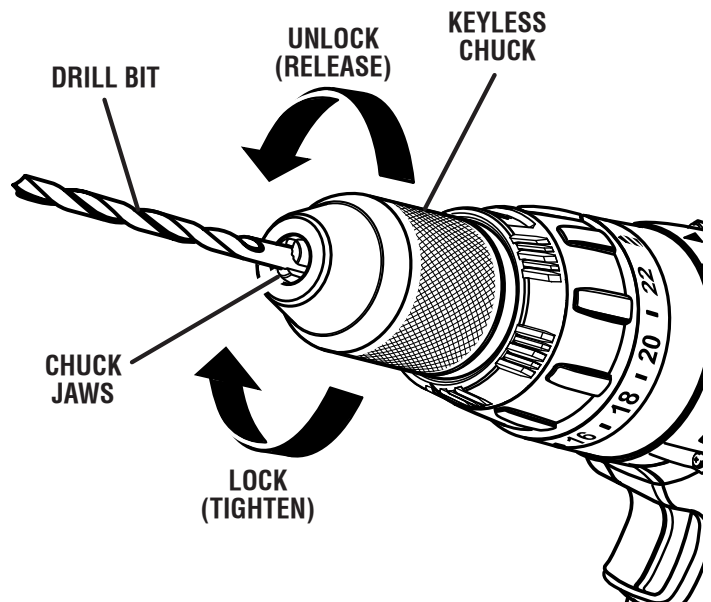


Fig. 6

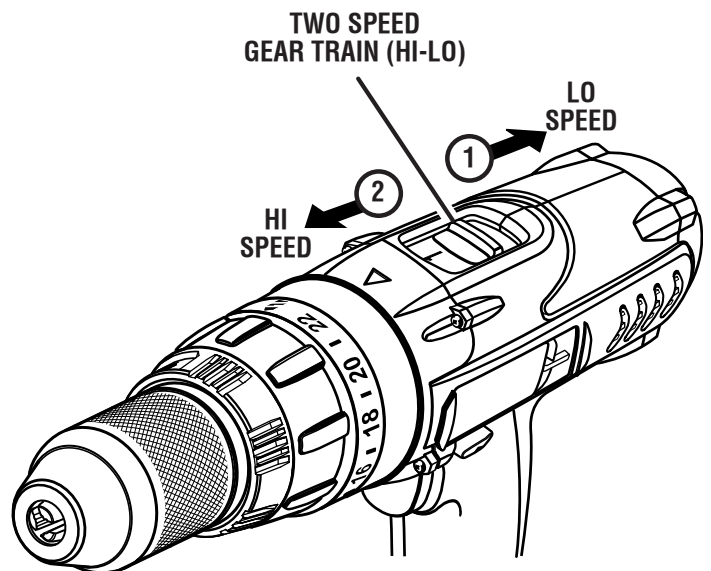


Fig. 7

# OPERATION


## ADJUSTABLE TORQUE CLUTCH


This product is equipped with an adjustable torque clutch for driving different types of screws into different materials. The proper setting depends on the type of material and the size of screw you are using.

## ADJUSTING TORQUE

See Figure 8.

There are twenty-four torque indicator settings located on the front of the drill.

- Rotate the adjusting ring to the desired setting.
  - 1 - 4 For driving small screws
  - 5 - 8 For driving screws into soft material
  - 9 - 12 For driving screws into soft and hard materials
  - 13 - 16 For driving screws into hard wood
  - 17 - 24 (  ) For driving large screws

**NOTE:** Setting 24 (  ) is recommended for maximum torque during hammer drilling applications.

## SELECTING HAMMER MODE OR DRILLING MODE


See Figure 9.

To adjust for type of drilling, turn the hammer mode ring on top of the motor housing to hammer mode or drilling mode.

**NOTE:** The hammer drill has not been designed for reverse hammering.

Use carbide-tipped bits and select hammer mode when drilling in hard materials such as brick, tile, concrete, etc.

Select normal drill mode when drilling with twist drills, hole saws, etc., in soft materials.

**NOTE:** When drilling in hammer mode, it is advisable to use **LO (1)** Speed. For best performance when in hammer mode, select the drill icon (  ) on the torque adjustment ring.

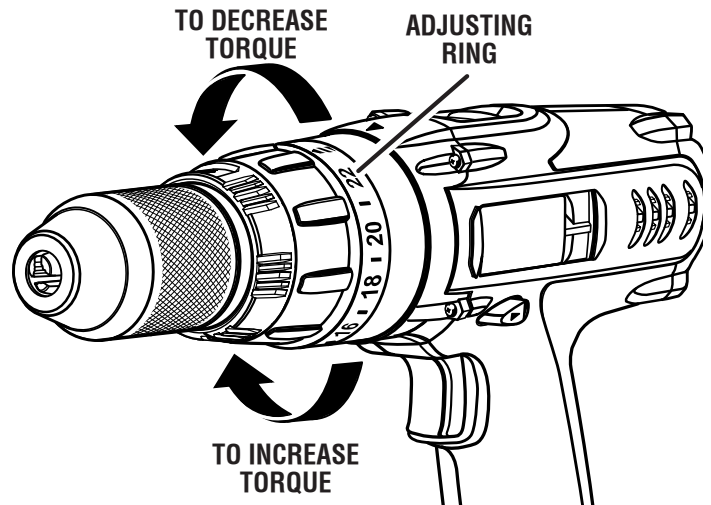


Fig. 8

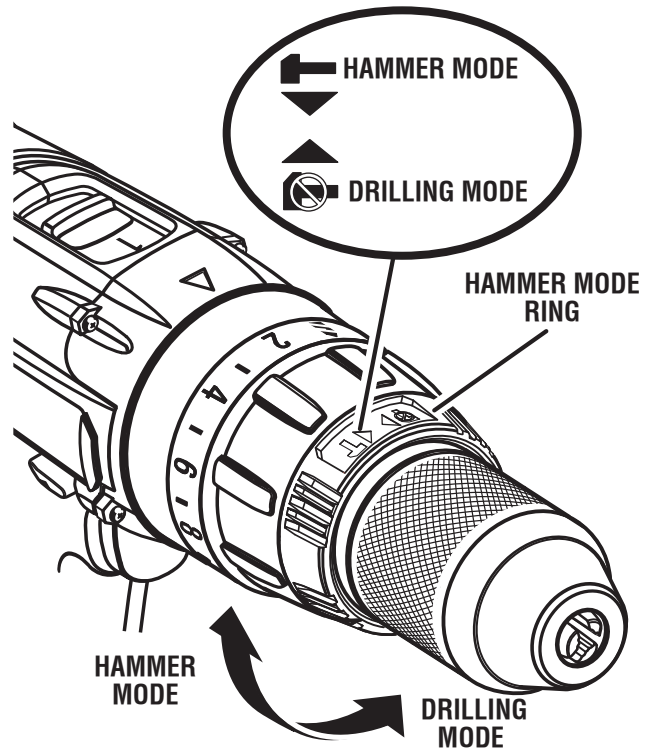


Fig. 9

# OPERATION

## INSTALLING BITS

See Figure 10.

- Lock the switch trigger by placing the direction of rotation selector in the center position.
- Open or close the chuck jaws to a point where the opening is slightly larger than the bit size you intend to use. Also, raise the front of the drill slightly to keep the bit from falling out of the chuck jaws.
- Insert the drill bit.

### **⚠ WARNING:**

Make sure to insert the drill bit straight into the chuck jaws. Do not insert the drill bit into the chuck jaws at an angle then tighten, as shown in figure 11. This could cause the drill bit to be thrown from the drill, resulting in possible serious personal injury or damage to the chuck.

- Tighten the chuck jaws securely on the bit.

**NOTE:** Rotate the chuck body in the direction of the arrow marked **LOCK** to close the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

## REMOVING BITS

See Figure 10.

- Lock the switch trigger by placing the direction of rotation selector in the center position.
- Open the chuck jaws.

**NOTE:** Rotate the chuck body in the direction of the arrow marked **UNLOCK** to open the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

- Remove the drill bit.

## BIT STORAGE

See Figure 12.

When not in use, bits provided with the drill can be placed in the storage area located on the rear base of the drill.

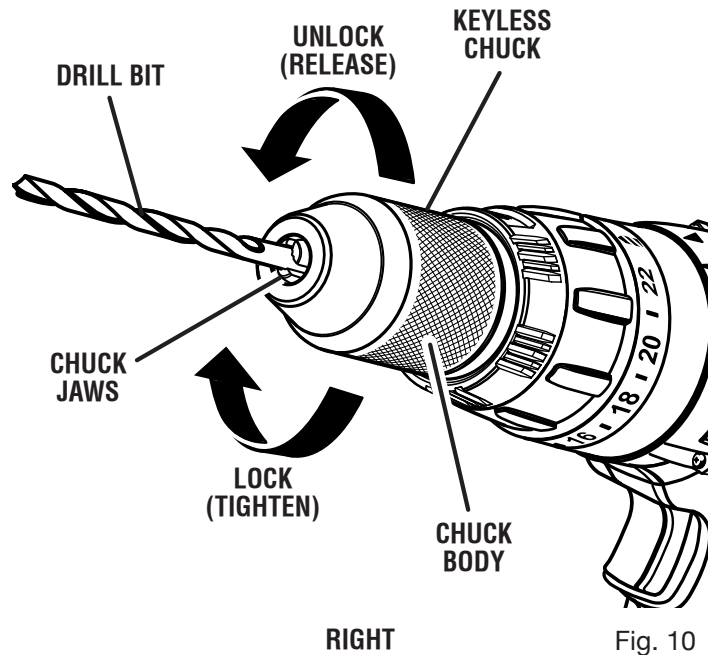


Fig. 10

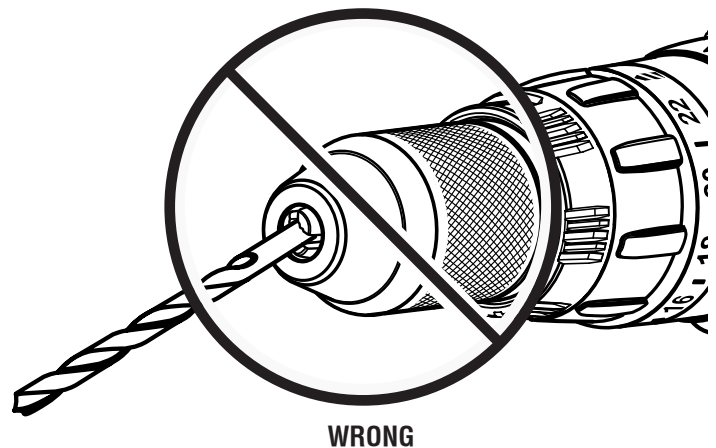


Fig. 11

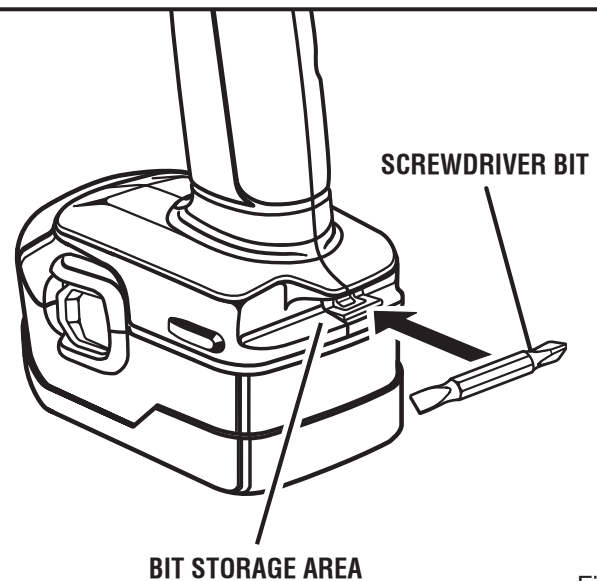


Fig. 12

# OPERATION

## USING THE AUXILIARY HANDLE ASSEMBLY

See Figure 13

An auxiliary handle assembly is packed with the drill for ease of operation and to help prevent loss of control. The handle can be rotated 360°, and it can also be mounted on the opposite side for left hand use.

To adjust the auxiliary handle assembly,

- Loosen the handle assembly by turning the handle counterclockwise.
- Rotate the handle assembly to the desired operating position.
- Securely tighten by turning the handle assembly clockwise.

Be sure the handle assembly is securely tightened against the clamp. This secures the handle assembly.

**NOTE:** For convenience and ease of starting threads, the hex nut has been trapped inside the molded slot in the handle assembly.

## DRILLING

See Figure 14.

- Check the direction of rotation selector for the correct setting (forward or reverse).
- Secure the material to be drilled in a vise or with clamps to keep it from turning as the drill bit rotates.
- Hold the drill firmly and place the bit at the point to be drilled.
- Depress the switch trigger to start the drill.
- Move the drill bit into the workpiece, applying only enough pressure to keep the bit cutting. Do not force the drill or apply side pressure to elongate a hole. Let the tool do the work.

### **⚠ WARNING:**

Be prepared for binding at bit breakthrough. When these situations occur, drill has a tendency to grab and kick opposite to the direction of rotation and could cause loss of control when breaking through material. If not prepared, this loss of control can result in possible serious injury.

- When drilling hard, smooth surfaces, use a center punch to mark the desired hole location. This will prevent the drill bit from slipping off-center as the hole is started.
- When drilling metals, use a light oil on the drill bit to keep it from overheating. The oil will prolong the life of the bit and increase the drilling action.
- If the bit jams in the workpiece or if the drill stalls, stop the tool immediately. Remove the bit from the workpiece and determine the reason for jamming.

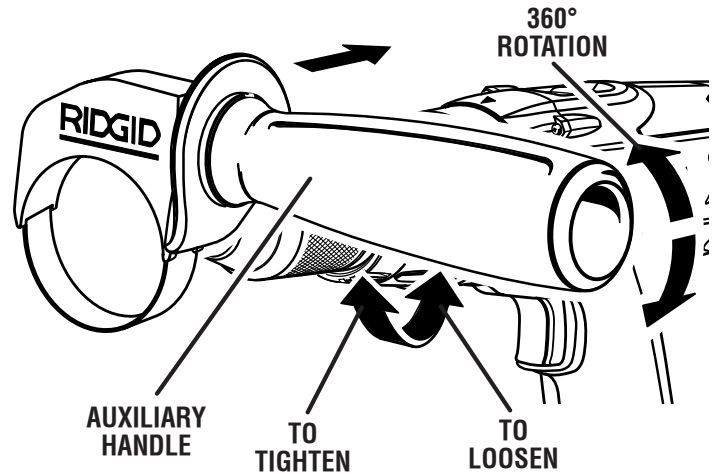


Fig. 13

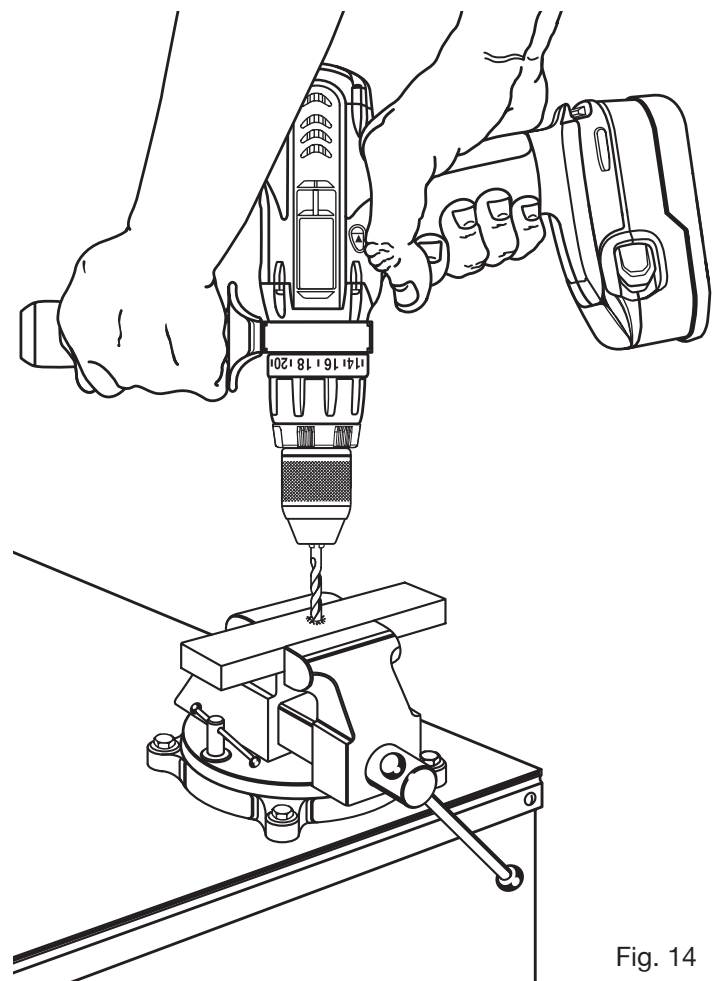


Fig. 14

**NOTE:** This drill has an electric brake. When the switch trigger is released, the chuck stops turning. When the brake is functioning properly, sparks will be visible through the vent slots on the housing. This is normal and is the action of the brake.



# OPERATION

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## WOOD DRILLING

For maximum performance, use high speed steel bits for wood drilling.

- Select normal drilling mode.
- Begin drilling at a very low speed to prevent the bit from slipping off the starting point. Increase the speed as the drill bit bites into the material.
- When drilling through holes, place a block of wood behind the workpiece to prevent ragged or splintered edges on the back side of the hole.

## METAL DRILLING

For maximum performance, use high speed steel bits for metal or steel drilling.

- Select normal drilling mode.
- Begin drilling at a very low speed to prevent the bit from slipping off the starting point.
- Maintain a speed and pressure which allows cutting without overheating the bit. Applying too much pressure will:
  - Overheat the drill;
  - Wear the bearings;
  - Bend or burn bits; and
  - Produce off-center or irregular-shaped holes.
- When drilling large holes in metal, start with a small bit, then finish with a larger bit. Also, lubricate the bit with oil to improve drilling action and increase bit life.

## MASONRY DRILLING

For maximum performance, use carbide-tipped masonry impact bits when drilling holes in brick, tile, concrete, etc.

- Turn hammer mode ring to the hammer drill icon to select hammer mode.
- Apply light pressure and medium speed for best results in brick.
- Apply additional pressure for hard materials such as concrete.
- When drilling holes in tile, practice on a scrap piece to determine the best speed and pressure. Begin drilling at a very low speed to prevent the bit from slipping off the starting point.

# MAINTENANCE

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## **WARNING:**

When servicing use only identical RIDGID replacement parts. Use of any other parts may create a hazard or cause product damage.

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## **WARNING:**

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

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## **WARNING:**

To avoid serious personal injury, always remove the battery pack from the tool when cleaning or performing any maintenance.

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## BATTERIES

The battery pack for this tool is equipped with nickel-cadmium rechargeable batteries. Length of service from each charging will depend on the type of work you are doing.

The batteries in this tool have been designed to provide maximum trouble-free life. However, like all batteries, they will eventually wear out. **Do not** disassemble battery pack and attempt to replace the batteries. Handling of these batteries, especially when wearing rings and jewelry, could result in a serious burn.

To obtain the longest possible battery life, we suggest the following:

- Remove the battery pack from the charger once it is fully charged and ready for use.

For battery pack storage longer than 30 days:

- Store the battery pack where the temperature is below 80°F.
- Store battery packs in a “discharged” condition.

## GENERAL MAINTENANCE

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

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## **WARNING:**

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

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Only the parts shown on the parts list are intended to be repaired or replaced by the customer. All other parts should be replaced at a RIDGID authorized service center.

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## BATTERY PACK REMOVAL AND PREPARATION FOR RECYCLING



To preserve natural resources, please recycle or dispose of batteries properly.

This product contains nickel-cadmium batteries. Local, state or federal laws may prohibit disposal of nickel-cadmium batteries in ordinary trash.

Consult your local waste authority for information regarding available recycling and/or disposal options.

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## **WARNING:**

Upon removal, cover the battery pack’s terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any of its components. Nickel-cadmium batteries must be recycled or disposed of properly. Also, never touch both terminals with metal objects and/or body parts as short circuit may result. Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.

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# MAINTENANCE

## CHUCK REMOVAL

See Figures 15 - 17.

The chuck may be removed and replaced by a new one.

- Lock the switch trigger by placing the direction of rotation selector in center position.
- Insert a 5/16 in. or larger hex key into the chuck of the drill and tighten the chuck jaws securely.
- Tap the hex key sharply with a mallet in a clockwise direction. This will loosen the screw in the chuck for easy removal.
- Open the chuck jaws and remove the hex key. Using a screwdriver, remove the chuck screw by turning it in a clockwise direction.

**NOTE:** The chuck screw has left hand threads.

- Insert the hex key into the chuck and tighten the chuck jaws securely. Tap sharply with a mallet in a counterclockwise direction. This will loosen the chuck on the spindle. It can now be unscrewed by hand.

## TO RETIGHTEN A LOOSE CHUCK

The chuck may become loose on the spindle and develop a wobble. Also, the chuck screw may become loose, causing the chuck jaws to bind and prevent them from closing. To tighten:

- Lock the switch trigger by placing the direction of rotation selector in the center position.
- Open the chuck jaws.
- Insert the hex key into the chuck and tighten the chuck jaws securely. Tap the hex key sharply with a mallet in a clockwise direction. This will tighten the chuck on the spindle.
- Open the chuck jaws and remove the hex key.
- Tighten the chuck screw.

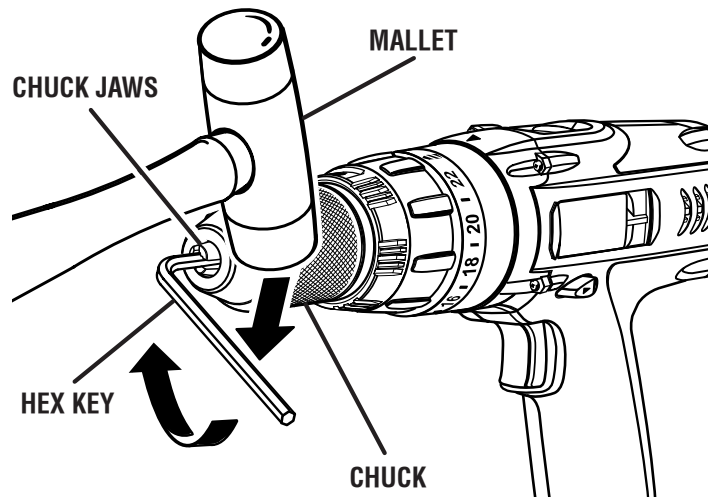


Fig. 15

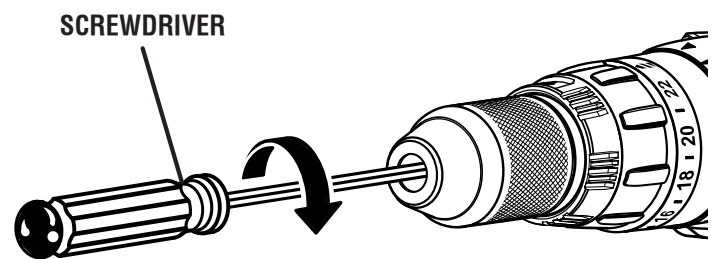


Fig. 16

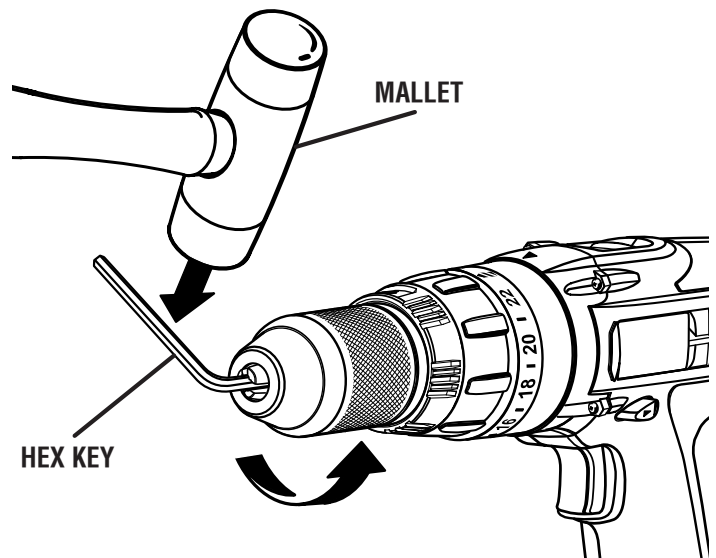


Fig. 17



# WARRANTY

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## RIDGID® HAND HELD AND STATIONARY POWER TOOL 3 YEAR LIMITED SERVICE WARRANTY

Proof of purchase must be presented when requesting warranty service.

Limited to RIDGID® hand held and stationary power tools purchased 2/1/04 and after. This product is manufactured by One World Technologies, Inc. The trademark is licensed from RIDGID, Inc. All warranty communications should be directed to One World Technologies, Inc., attn: RIDGID Hand Held and Stationary Power Tool Technical Service at (toll free) 1-866-539-1710.

### 90-DAY SATISFACTION GUARANTEE POLICY

During the first 90 days after the date of purchase, if you are dissatisfied with the performance of this RIDGID® Hand Held and Stationary Power Tool for any reason you may return the tool to the dealer from which it was purchased for a full refund or exchange. To receive a replacement tool you must present proof of purchase and return all original equipment packaged with the original product. The replacement tool will be covered by the limited warranty for the balance of the 3 YEAR service warranty period.

### WHAT IS COVERED UNDER THE 3 YEAR LIMITED SERVICE WARRANTY

This warranty on RIDGID® Hand Held and Stationary Power Tools covers all defects in workmanship or materials and normal wear items such as brushes, chucks, motors, switches, cords, gears and even cordless batteries in this RIDGID® tool for three years following the purchase date of the tool. Warranties for other RIDGID® products may vary.

### HOW TO OBTAIN SERVICE

To obtain service for this RIDGID® tool you must return it; freight prepaid, or take it in to an authorized service center for RIDGID® branded hand held and stationary power tools. You may obtain the location of the authorized service center nearest you by calling (toll free) 1-866-539-1710 or by logging on to the RIDGID® website at [www.ridgid.com](http://www.ridgid.com). When requesting warranty service, you must present the original dated sales receipt. The authorized service center will repair any faulty workmanship, and either repair or replace any part covered under the warranty, at our option, at no charge to you.

### WHAT IS NOT COVERED

This warranty applies only to the original purchaser at retail and may not be transferred. This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defect resulting from misuse, abuse, neglect, alteration, modification or repair by other than an authorized service center for RIDGID® branded hand held and stationary power tools. Consumable accessories provided with the tool such as, but not limited to, blades, bits and sand paper are not covered.

**RIDGID, INC. AND ONE WORLD TECHNOLOGIES, INC. MAKE NO WARRANTIES, REPRESENTATIONS OR PROMISES AS TO THE QUALITY OR PERFORMANCE OF ITS POWER TOOLS OTHER THAN THOSE SPECIFICALLY STATED IN THIS WARRANTY.**

### ADDITIONAL LIMITATIONS

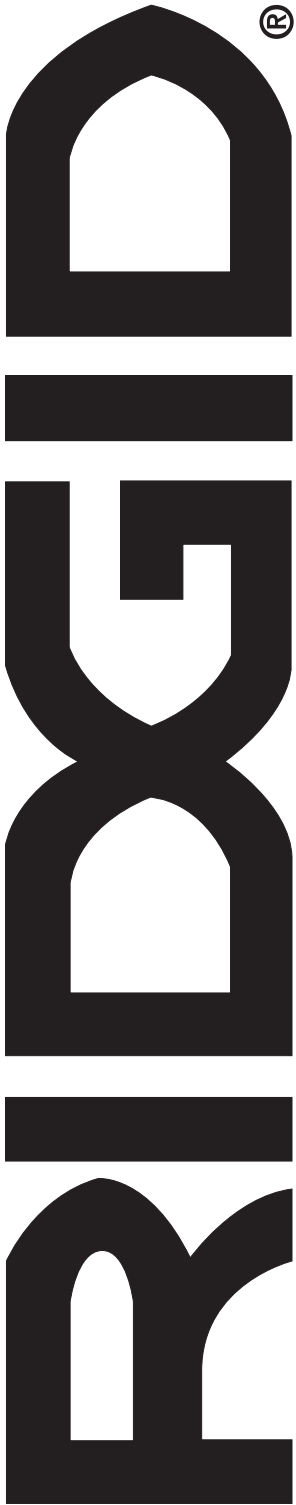
To the extent permitted by applicable law, all implied warranties, including warranties of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, are disclaimed. Any implied warranties, including warranties of merchantability or fitness for a particular purpose, that cannot be disclaimed under state law are limited to three years from the date of purchase. One World Technologies, Inc. and RIDGID, Inc. are not responsible for direct, indirect, incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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**One World Technologies, Inc.**

P.O. Box 35, Hwy. 8  
Pickens, SC 29671

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# OPERATOR'S MANUAL

## 1/2 in., 18 VOLT HAMMER DRILL

### R8411503

#### Customer Service Information:

For parts or service, contact your nearest RIDGID authorized service center. Be sure to provide all relevant information when you call or visit. For the location of the authorized service center nearest you, please call 1-866-539-1710 or visit us online at [www.ridgid.com](http://www.ridgid.com).

The model number of this tool is found on a plate attached to the motor housing. Please record the serial number in the space provided below. When ordering repair parts, always give the following information:

**Model No.** \_\_\_\_\_ R8411503 \_\_\_\_\_

**Serial No.** \_\_\_\_\_